

a selection control means for controlling intensity distribution of said carrier signals according to transmission characteristics of said carrier signals detected on the receiver side.

2. (Amended) A sender as defined in claim 1, wherein said sending signal means [has] includes:

a carrier signal generating means for generating a plurality of carriers [signals with the frequencies assuming values at specific intervals]; and

a multiplying means for multiplying said carriers [signals] to generate said carrier signals by the input signal and sending [out] said [multiplied] carrier signals on a transmission line.

4. A sender as defined in claim 2, wherein said sending signal generating means are provided [for a plurality of] with said input signal[s] that modulates said plurality of carriers, and [there is] the sender further [provided] comprises a sending signal synthesizing means for synthesizing the outputs from said [respective] sending signal generating means.

6. (Amended) A [receiver] sender as defined in claim [3] 2, wherein said selection control means selects one of said carriers [signal] to be put to said carrier signal generating means [out of said plurality of carrier signals].

7. (Amended) A [receiver] sender as defined in claim [3] 2, wherein said selection control means [effects] provides a uniform distribution [in the] mixing ratio among all the carriers [signals] to be put to said carrier signal generating means.

8. (Amended) A sender as defined in claim [3] 2, wherein said selection control means [effects] provides a weighted distribution [in the] mixing ratio among all the carriers [signals] to be put to said carrier signal generating means on the basis of the [measurement results of] transmission line characteristics of the respective carrier signals received by the receiver.

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9. (Amended) A sender for use in a communications system in which the sender and [the] a receiver are connected to each other via a transmission line, said sender comprising:

a sending signal generating means for converting [the] an input signal into a plurality of carrier signals [assuming values at specific intervals so as not to interfere] non-interfering with each other both on the axis of frequency and the axis of time and outputting the converted signals; and

a selection control means for controlling intensity distribution of said carrier signals according to transmission characteristics of said carrier signals detected on the receiver side.

10. (Amended) A sender [as defined in claim 9, wherein said sending signal generating means comprises] for use in a communications system in which the sender and a receiver are connected to each other via a transmission line, said sender comprising:

an encoder for dividing [one] an input signal into a plurality of [the same signals as said] divided input signals;

a plurality of filters, with said plurality of divided input signals as input, for outputting a plurality of signals [with frequencies assuming values at specific intervals], said plurality of signals free from interfering with each other both on the axis of frequency and the axis of time; and,

a sending signal synthesizing means for synthesizing the outputs of said filters.

14. (Amended) A receiver for use in a communication system in which [the] a sender and a receiver are connected to each other via a transmission line, said receiver comprising:

a transmission line characteristics measuring means for receiving carrier signals that the sender send in after converting [the] an input signal[s] into said carrier signals [with frequencies assuming values at specific intervals] and for determining transmission line characteristics in [the] respective frequency bands for said [plurality of] carrier signals; and

a receiving signal synthesizing means for synthesizing the outputs of said transmission line characteristics measuring means;
wherein said carrier signals are generated based on the same input signal.

15. (Amended) A receiver as defined in claim 14, wherein there is further provided a selection control means for controlling the intensity distribution among [a plurality of] said carrier signals in synthesizing carrier signals at said receiving signal synthesizing means on the basis of the transmission characteristics on said transmission line of the respective carrier signals determined by said transmission line characteristics measuring means.

16. (Amended) A receiver as defined in claim 15, wherein said selection control means selects signals to be put to said receiving signal synthesizing means [out of said plurality of] from said carrier signals.

17. (Amended) A receiver as defined in claim 15, wherein said selection control means [effects] provides a uniform distribution [in the] mixing ratio among all the carrier signals to be put to said receiving signal synthesizing means.

18. (Amended) A receiver as defined in claim 15, wherein said selection control means [effects] provides a weighted distribution [in the] mixing ratio among all the carrier signals to be put to said receiving signal synthesizing means on the basis of the [measurement results of] transmission line characteristics of the corresponding carrier signals.

19. (Amended) A receiver as defined in claim 14, wherein a transmission line characteristics measuring means determines the signal intensity of said [plurality of] carrier signals received.

21. (Amended) A receiver as defined in claim 14 wherein a transmission line characteristics measuring means determines both the signal intensity of said [plurality of]

carrier signals received and the relative phase of said [plurality of] carrier signals received in relation to a reference phase.

22. (Amended) A receiver as defined in claim 19, wherein said selection control means has a lower threshold value and/or upper threshold value stored therein and selects the carrier signals[, the] having signal intensity [of which is] over said lower threshold value and/or said upper threshold value.

23. (Amended) A receiver as defined in claim 21, wherein said selection control means has a lower threshold value and/or upper threshold value stored therein and selects the carrier signals[, the] having signal intensity [of which is] over said lower threshold value and/or said upper threshold value.

24. (Amended) A receiver as defined in claim 20, wherein said selection control means has threshold values defining a phase range stored therein and selects the carrier signals[, the] having relative phase value [of which is] within said threshold value range.

27. (Amended) A receiver as defined in claim 25, wherein said [filters are a] plurality of filters are provided for [a plurality of the corresponding] said carrier signals so formed on the sender side not to interfere with each other both on the axis of frequency and the axis of time, the central frequencies of said plurality of filters being frequencies of said carrier signals and said filters letting through said carrier signals which will not interfere with each other both on the axis of frequency and the axis of time.

28. (Amended) A communication system in which a sender and a receiver are connected to each other, wherein the sender has:

a carrier signal generating means for generating a plurality of carrier signals with different frequencies based on an input signal [assuming values at specific intervals]; and,

a multiplication means for sending out on [said] a transmission line [the input signals with] said carrier signals [as carrier] modulated by said input signal; and,



wherein the receiver is provided with:

a transmission line characteristics measuring means for receiving [the input signals sent with] the carrier signals modulated by said input signal [as carrier] from the sender and for determining transmission line characteristics in [the] respective frequency bands of said [plurality of] carrier signals; and

a receiving signal synthesizing means for synthesizing said [plurality of] carrier signals on the basis of the [measurement results by said] transmission line characteristics [measuring means].

29. (Amended) A communication system in which [the] a sender and [the] a receiver are connected to each other, wherein the sender has:

an encoder for [generating] dividing an input signal into a plurality of divided input signals [from one input signal],

a plurality of filters for, with said plurality of divided input signals as input, outputting a plurality of signals [with frequencies assuming values at specific intervals], said plurality of signals satisfying the orthogonal requirements both on the axis of frequency and the axis of time; and

a sending signal synthesizing means for synthesizing the outputs of said filters and generating a plurality of carrier signals,

and wherein the receiver [is provided with] comprises:

a transmission line characteristics measuring means for receiving said [input signals] plurality of carrier signals and determining transmission line characteristics in the respective frequency bands of said plurality of carrier signals; and

a receiving signal synthesizing means for synthesizing said plurality of carrier signals on the basis of the measurement results by said transmission line characteristics measuring means.

30. (Amended) A communication system as defined in claim 28, [wherein there is further provided with] further comprising a selection control means for controlling said receiving signal synthesizing means with regard to the intensity distribution at the time of transmission among said plurality of carrier signals on the basis of the transmission

characteristics on said transmission line of the respective carrier signals [according to the measurement results by said transmission line characteristics measuring means.]

33. (Amended) A communication system as defined in claim 28, wherein said sender [is provided with] includes a sending signal generating means comprising a carrier signal generating means and a multiplication means for each of [a plurality of] said plurality of divided input signals, and furthermore with a sending signal synthesizing means for synthesizing the outputs from the respective multiplication means.

34. (Amended) A communication system as defined in claim 29, wherein said encoder in said sender selects a carrier to allot for each of [a] said plurality of divided input signals.

36. (Amended) A communication system as defined in any of claims 30, wherein said selection control means selects [out of said plurality of] carrier signals [ones] to synthesize on the basis of the [measurement results by said] transmission line characteristics [measuring means].

37. (Amended) A communication system as defined in any of claim 30, wherein said selection control means [effects] provides a uniform distribution [in the] mixing ratio among said plurality of carrier signals.

38. (Amended) A communication system as defined in any of claims 30, wherein said selection control means [effects] provides weighted distribution in the mixing ratio among said plurality of carrier signals on the basis of the [measurement results of] transmission line characteristics of the respective carrier signals.

39. (Amended) A communication system as defined in claim 35, wherein said transmission line characteristics measuring means determines the signal intensities in said [plurality of receiver] carrier signals received by the receiver.

40. (Amended) A communication system as defined in claim 35, wherein said transmission line characteristics measuring means determines the relative phase in said [plurality of receiver] carrier signals received by the receiver in relation to a reference phase.

41. (Amended) A communication system as defined in claim 35, wherein said transmission line characteristics measuring means determines both the signal intensities and the relative phase in said [plurality of received] carrier signals received by the receiver in relation to a reference phase.

42. (Amended) A communication system as defined in claim 39, wherein said selection control means has a lower threshold value and/or upper threshold value stored therein and selects the carrier signals[, the] having signal intensity [of which is] over said lower threshold value and/or said upper threshold value.

43. (Amended) A communication system as defined in claim 41, wherein said selection control means has a lower threshold value and/or upper threshold value stored therein and selects the carrier signals[, the] having signal intensity [of which is] over said lower threshold value and/or said upper threshold value.

44. (Amended) A communication system as defined in claim 40, wherein said selection control means has threshold values defining a phase range stored therein and selects the carrier signals[, the] having relative phase [of which is] within said threshold value range.

45. (Amended) A communication system as defined in claim 41, wherein said selection control means has threshold values defining a phase range stored therein and selects the carrier signals[, the] having relative phase [of which is] within said threshold value range.

